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CONGRESSIONAL RECORD — SENATE

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served as a consultant to the U.S. delegation to the San Francisco Conference that helped draft the charter in 1945.

I ask unanimous consent to have printed in the Record excerpts from the Dag Hammarskjöld memorial lecture by Jacob Blaustein, entitled "Human Rights—A Challenge to the United Nations and to Our Generation," delivered at Columbia University, December 4, 1963.

There being no objection, the excerpts were ordered to be printed in the Record, as follows:

HUMAN RIGHTS: A CHALLENGE TO THE UNITED NATIONS AND TO OUR GENERATION

(Dag Hammarskjöld memorial lecture by Jacob Blaustein at Columbia University, New York City, December 4, 1963)

It was generally understood that one of the first tasks of the Commission on Human Rights, which by article 68 of the charter the Economic and Social Council was required to set up, would be to prepare a draft of an International Bill of Rights.

The Commission on Human Rights was duly established and in February 1947, began to work under the chairmanship of that great human being, the late Mrs. Eleanor Roosevelt. As expected, it gave priority to the International Bill of Rights which it decided would have three parts: a declaration, a multilateral convention, and measures of implementation.

The Commission worked so well that within a little over a year it had completed its draft of the declaration and part of a convention which were sent up to the General Assembly in the fall of 1948. After a long and difficult debate, the General Assembly adopted, on the night of December 10, 1948, the first step toward an International Bill of Rights under the name of the Universal Declaration of Human Rights. The Universal Declaration of Human Rights consists of 30 articles in which are defined all the traditional, civil, and political rights, as well as the more newly recognized and more controversial economic, social, and cultural rights.

The declaration, which was adopted as a resolution of the General Assembly, was never meant to be legally binding, but to be, as its preamble says, "a common standard of achievement for all peoples and all nations." Nevertheless, in the 15 years since its adoption, it has acquired a political and moral authority which is unequaled by any other International Instrument with the exception of the Charter itself. It is no exaggeration to say that no International Instrument has ever received the same acceptance on all levels of society.

In the United Nations itself it has an authority which is surpassed only by the Charter, and it is constantly invoked not only in the General Assembly but also in the Security Council, in the Trusteeship Council, and other organs. It has found its way into various International conventions, including the Japanese Peace Treaty and the European Convention on Human Rights. Many of its provisions are reproduced, sometimes textually, in the many national constitutions that have been adopted—particularly in the so-called new countries since 1948; and it has inspired and sometimes become part of the national legislation of the many countries. It has even been cited with approval by national courts. It is, as the late Pope John XXIII said in his encyclical "Pacem in Terris," "a document of the very greatest importance."

CONVENTIONS—COVENANTS

The next step toward an International bill of rights was to have been a multilateral convention which would be legally binding on those States which ratified it. Later it

was decided—largely on the initiative of the United States—that there would be two conventions; one on political and civil rights; and the other on economic, social, and cultural rights.

The reasoning given for this division was that the two categories of rights required different modes of implementation. Governments can be expected to insure respect for political and civil rights, but the implementation of economic and social rights can only be progressive, particularly in the economically underdeveloped countries. There is something to be said for this position, but I believe that the main reason for supporting this distinction in the United States was the fear of the administration that the Senate might refuse to ratify a convention on economic, social, and cultural rights.

The Commission on Human Rights finished its work on these two conventions, which it decided to call covenants, in 1954 and sent them to the General Assembly which has been working on them ever since; nor is the end yet in sight. Nine or more years may seem like an unconscionably long time for the General Assembly to have been working on these drafts, but the work is extremely difficult and often highly controversial. Some of the articles of these covenants are as intricate as the whole texts of other conventions that have occupied the whole time of International conferences after careful diplomatic preparation. And they involve an attempt to achieve a synthesis of the ideals of 111 sovereign states reflecting very different religious, philosophical, and political backgrounds, and cultural traditions from the Western, Asian, and African worlds.

It should also be noted—and this is helpful—that the debates on the covenants have provided the context for the ventilation of a number of such questions as anticolonialism and the self-determination of peoples which are directly related to basic human rights and are also highly political.

The fact remains, however, that 16 years after the San Francisco Conference, the United Nations has still to justify the hopes which, in this particular matter at least, men and women everywhere have placed in it; and it is not difficult to understand why there should be some dissatisfaction with the performance.

The main differences between the covenants and the Universal Declaration of Human Rights are (1) the covenants when adopted will have a binding force in international law not possessed by the declaration and (2) the covenants are to be supported by measures of implementation. This is indeed their chief justification.

The question of implementation is therefore most important. Indeed, this is the test of the sincerity of governments in this matter. As to this mode of implementation proposed for the Covenant on Economic, Social and Cultural Rights, ratifying states will only be asked to report to the United Nations on the progress that they make toward the achievement of these rights.

These reports would be reviewed sympathetically by the Economic and Social Council with a view to assisting the states, if necessary, toward achievement of the standards laid down in the covenant.

In the matter of civil and political rights, however, the measures of implementation that have been suggested—they have not yet been discussed by the General Assembly—are more complicated. According to the plan there would be established a factfinding and conciliation organ known as the Human Rights Committee to which states parties could complain that other states parties had violated their obligations under the covenant. The Human Rights Committee would attempt to bring about a settlement and failing this, would publish a report indicating whether in its opinion there had been a

violation of the covenant. There would also be a right of recourse to the International Court of Justice.

Now the main feature of this system is that only states could complain to the Human Rights Committee, and therein lies its weakness. For experience has shown that states are unlikely to complain about the conduct of other states towards individuals, unless they have a political reason for doing so. That they would not complain against their own conduct seems pretty obvious. A similar procedure in the International Labor Organization Constitution has been invoked only 3 times in 43 years.

SOME ACHIEVEMENTS—MUCH STILL TO BE DONE

The future of human rights was left on the doorstep of the United Nations at San Francisco. What has been the response of the United Nations to that challenge? Has the response been adequate?

I will say this. The United Nations has many achievements to its credit. The Universal Declaration of Human Rights is undoubtedly one of the most important international instruments ever adopted, and it has already had a significant impact on events. The United Nations has also adopted a number of important conventions, including the Genocide Convention which our country should have ratified long ago. As to the two covenants on civil and political rights and economic, social, and cultural rights which we have discussed here, the future is more uncertain; but if they include an adequate system of implementations, then all the time and effort devoted to them over a period of nearly two decades will be justified—provided a significant number of countries, including the United States, ratify them.

The organization is also engaged in the token program of advisory services which I have mentioned and which, if developed, could be useful.

Perhaps most important, the United Nations has provided an international forum for the ventilation of a number of great issues affecting human rights in many parts of the world, and has helped as earlier indicated to crystallize the formation of international opinion. This, in the final analysis, I would emphasize, is the strongest weapon that can be used for the promotion of human rights.

Merely to establish this inventory is, I think, to answer the question whether the response to the challenge has been adequate; for we must put at the other side of the ledger the urgent and tremendous need for action; and when the balance is struck, we must conclude that much remains to be done—indeed, that an effort is required significantly greater than any that has been made up till now.

POSITIVE PROPOSAL—UNITED NATIONS HIGH COMMISSIONER FOR HUMAN RIGHTS

With this above in mind, I offer a positive proposal. It may well be that the time has arrived to strengthen the executive powers of the United Nations in the matter of human rights. Thus, the General Assembly or the Secretary-General might appoint an independent personality who would be a kind of international commissioner dealing with human rights, bearing perhaps the title of United Nations High Commissioner for Human Rights.

Such a high commissioner could, amongst other things, lend his good offices to governments and be available at their request to investigate situations where there have been alleged violations of human rights; he could assist underdeveloped countries in the organization of various institutions for the promotion of human rights; he could advise the economic and social council on the human rights aspects of the development decade; and he could assist the Com-

mission on Human Rights in its review of the periodic reports from governments on human rights to which I have already referred.

Creating such a position would not require a treaty. It would be in the same category, for example, as has been the appointment of the United Nations High Commissioner for Refugees. Therefore, it should also have the ready support and cooperation of those member states, like the United States and some others, which have not been willing thus far to enter into treaties.

It would seem to me that this proposal is practical and the very minimum that should be done at this time. If the human rights commitment in the United Nations Charter is to be really effective, the trend of development must be in the direction of greater capacity to deal with—initially, at least to expose and fix, if not to judge—specific violations. I say this is the very minimum.

INVOLVED IS PERHAPS THE FUTURE OF THE HUMAN RACE ON THIS PLANET

Ladies and gentlemen, United Nations concern with human rights is a reflection of a deep social malaise in our own time. On what the United Nations does, on what we in our own country do, to find and apply a cure for this malaise depends perhaps the future of the human race on this planet; just as much as on the elimination of war and the control of armaments, depends whether mankind will continue to inhabit it. That, in my opinion, is the challenge to our generation, to our times—the challenge to the United Nations.

U.S.S.R. BLOCKS PASSOVER MATZOTH

Mr. JAVITS. Mr. President, on the eve of the Passover holiday, I received reports that Soviet officials were preventing Jews in the Soviet Union from obtaining matzoth by impounding 2,000 10-pound packages paid for and sent with full import clearances by Americans in New York, Philadelphia, Chicago, and Los Angeles to friends and relatives in the Soviet Union.

It is hard to believe that in this decade, a major world power such as the Soviet Union would stoop to this kind of petty but cruel and repressive official harassment of a helpless minority.

At my request, our Embassy in Moscow tried promptly but without success to obtain the release of these packages in time for the holiday. According to the report I received, the spokesman of the Soviet Ministry of Foreign Affairs denied that there was any problem regarding matzoth, asserted that sufficient matzoth had been prepared in the Soviet Union for the use of Jews, and that the agitation over this supply was inspired by people outside the Soviet Union in order to embarrass it. He said that packages from individuals to individuals would be delivered, but those sent by organizations would be returned. He emphasized that in any case this was an internal matter and that the Soviet Ministry of Foreign Affairs was surprised that the United States would inquire.

On this point, I am proud to say there is ample historical precedent for the action by our Embassy. For more than a century the United States has re-

peatedly protested the persecution of oppressed minorities by foreign governments and justified these protests in the name of humanity. Since 1840, the United States has done so alone and also in concert with other nations against actions by the Ottoman Empire, Rumania, the Austro-Hungarian Empire, the Russian Tsarist government and the Nazi government. We have not been silent in the face of persecution.

I ask unanimous consent to have printed in the Record the cablegram sent March 25 to Premier Khrushchev by the American Conference on Soviet Jewry protesting the impounding of matzoth packages, and the report I received from the Department of State, dated March 31.

There being no objection, the cablegram and the letters were ordered to be printed in the Record, as follows:

DEPARTMENT OF STATE,
Washington, March 31, 1964.

The HONORABLE JACOB K. JAVITS,
U.S. Senate.

DEAR SENATOR JAVITS: As you are aware, after having been informed by Mr. Lesser of your office about the nondelivery in the Soviet Union of packages of matzoth which had been shipped by the Synagogue Council of America, the Department instructed the Embassy at Moscow to take up this question with the Soviet Ministry of Foreign Affairs in the hope of having the matzoth delivered in time for use in the Passover season.

Mr. Lesser brought this problem to the attention of the Department on March 25. A telegram was immediately sent instructing the Embassy to inform the Soviet Ministry of Foreign Affairs about the shipment of 2,000 packages of matzoth to Soviet addressees through five firms licensed to send packages to the Soviet Union. In informing the Ministry, the Embassy asked that the packages be released. The representative of the Ministry replied to the Embassy that before checking with Soviet customs it would be necessary to know exactly the quantity sent, the names of the shipping firms, how the packages were shipped, to what addresses and when.

After consultation with Mr. Lesser, the Department received information which enabled it to instruct the Embassy on March 27 to inform the Soviet authorities that the Synagogue Council of America had shipped 2,000 packages of matzoth weighing 10 pounds each to 2,000 individual addressees in the Moscow area between February 9 and 13. On the basis of Mr. Lesser's information, the Embassy was further informed that the packages had been shipped by six firms including Eugene A. Shershev, Cosmos Travel Co., of New York, Globe Co., of Chicago, a Philadelphia firm, and two Brooklyn firms whose names were not available. The Embassy was told that friends and relatives had paid \$27 for each package which includes \$4.95 prepaid customs duties; and that on this short notice it was not feasible to supply the names of the addressees. The Embassy was also told that you hoped that Soviet customs authorities would release the packages.

Upon receipt of this message the Embassy on March 28 again took up the question of the undelivered matzoth with the Soviet Ministry of Foreign Affairs, noting your expressed interest and giving the information outlined in the preceding paragraph. The Embassy pointed out that the question was related to religion and expressed the hope that the Ministry would lend assistance so

that the matter of the matzoth packages would not become the subject of unfavorable publicity.

The representative of the Soviet Ministry of Foreign Affairs immediately responded to the Embassy undertaking with a prepared oral statement to the effect that the Ministry was surprised that the Embassy considered it possible to intrude in matters clearly within the internal affairs of the Soviet Government. The spokesman further stated that there was no real problem involved in this question since it was well known that sufficient matzoth had been prepared in the Soviet Union for the use of Jewish believers; that it was therefore clear that the present problem had been inspired by people outside the Soviet Union for their own bad purposes. The representative added that when packages are sent by private persons outside the Soviet Union to private Soviet citizens these packages are delivered promptly; but that when foreign firms or organizations send packages this action violates the Soviet foreign trade monopoly, and, accordingly, under Soviet law such packages are returned to the sender. The spokesman of the Ministry repeated that this question is an internal matter and that the Ministry was surprised that the Embassy would interfere.

The Soviet representative would not say whether the packages of matzoth had actually been sent back or are still in Moscow. The Embassy informed the Department that it will attempt to learn the current status of the packages when the Soviet Customs Office reopened on Monday, March 30, and whether there is any possibility of reimbursement for the prepaid customs duties.

The Department will inform you promptly of any information which is received from the Embassy in Moscow. In the meantime, if the Department can be of any further assistance, please let me know.

Sincerely yours,

FREDERICK G. DUTTON,
Assistant Secretary.

NEW YORK, N.Y., March 25, 1964.

Senator JACOB K. JAVITS,
Senate Office Building,
Washington, D.C.

The following cablegram was sent today to Premier Khrushchev in Moscow:

"I am communicating to you on behalf of 24 major national American-Jewish organizations representing the majority of the 5½ million Jews in the United States to express our profound disappointment and regret over the information reported in the Soviet Press indicating that shipments of matzoth from abroad to Soviet Jewish families are being detained by customs authorities in Moscow. The Jewish festival of Passover begins at sundown Friday March 27. Unless release of these shipments is forthcoming immediately these parcels cannot arrive in time for the Passover observance. We urge your intervention to insure prompt distribution of the matzoth parcels now being detained. We are also dismayed over the campaigns reportedly being conducted in the Soviet press designed to intimidate recipients of these parcels and to force them into refusing or returning the matzoth packages sent. We understand shipments of matzoth for Passover were authorized and that import licenses were issued to numerous companies throughout the world by Soviet authorities. We ask for immediate cessation of any acts of harassment aimed at Jewish families receiving these packages. We are aware that the supply of matzoth in the Soviet Union is inadequate to meet the religious needs of Soviet Jews. Upon receiving authorization from you or your representatives and assurance of prompt distribution and delivery we are prepared to send shipments of matzoth by air

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from supplies presently available in Europe. We offer to send these shipments to any address you designate that will insure distribution in time for use during the Passover celebration."

LEWIS H. WEINSTEIN,
Boston, Mass., in Behalf of the American Jewish Conference on Soviet Jewry, 838 Fifth Avenue, New York, N.Y.

FREEDOM OF INFORMATION

Mr. HARTKE. Mr. President, the freedom of information bill (S. 1666) introduced by the Senator from Missouri [Mr. LONG] and my colleague, the Senator from Indiana [Mr. BAYH], and others, has for many months awaited action by the Congress and should receive the earliest possible consideration.

This legislation would call upon the officers of the U.S. Government to use commonsense in making available information about the operation of their various agencies.

The epigram that "the public's business should always be kept public" is strongly believed by the American citizenry; and the dismay of anyone seeking knowledge about the functions of government is thoroughly understandable when he is told he may not know.

"We are not allowed to give out that information," is perhaps the most aggravating and shocking bureaucratic utterance our citizens confront. There is no excuse in practically every case for such treatment of the public.

Examination of S. 1666 reveals that the proposed legislation would open the records but slightly. Many of the newspaper witnesses before the Senate Judiciary Committee indicated that it was less than they hoped might be done to correct a bad situation.

The comments of many of the Federal agencies, on the contrary, sounded as though they would be forced to divulge the most delicate private matters entrusted to their care. This is nonsense.

No one is seeking to force the Treasury Department to make public the income tax returns of private citizens. The Senator from Missouri [Mr. LONG], a man of the most responsible outlook on the law and the relation of government to the citizen, would never seek to extract from the Federal Trade Commission the secrets of one businessman to be given improperly to another.

The purpose of S. 1666 is simple and obvious: Insofar as possible, to permit the public to know and to understand the reasons for the rulings and orders and actions of the Federal agencies whose functions affect their lives.

When he testified before the Committee on the Judiciary last October, the distinguished assistant publisher of the Indianapolis Star and the Indianapolis News, Mr. Eugene S. Pulliam, commented on the administrative procedures act by which Federal agencies close their books against public examination—the law which this freedom of information bill seeks to correct. Noting that the present statute accords the Federal bureaucrat the right to decide what information to disclose, and to whom it may be made known, Mr. Pulliam observed the law al-

lows secrecy "in the public interest," or "for good cause found."

Mr. Pulliam correctly observed:

Personally, I think any citizen is "properly and directly concerned" in affairs of his government. The trouble is that most agencies don't think so, as testimony before congressional committees has shown. And furthermore, the decision as to whether a person is properly and directly concerned is left, not to the Congress, not to a court, not to a citizen, but to the agency which becomes both judge and jury.

This is the essence of the freedom of information discussion. The press, I have discovered, usually finds a way to get the information it seeks, no matter how craftily the bureaucrat tries to hide it. So what we are talking about is the right of the individual citizen to have accurate and freely available information about the Government of the United States, its decisions, its orders, the rules and regulations of its departments and agencies. The bill does not give the mischievously curious individual a "fishing license" to dip into government files for his neighbor's secrets. It does provide for informing the public on matters about which the public deserves the fullest information.

Therefore, I am most emphatically in favor of the enactment of the bill sponsored by the Senator from Missouri [Mr. LONG], and I urge my colleagues on both sides of the aisle to give their support to this measure, which will do much to restate to the American people a principle they ardently believe—that the public's business must, indeed, be kept public.

THE CHESAPEAKE BAY BRIDGE TUNNEL—AN AMAZING ENGINEERING FEAT

Mr. BYRD of Virginia. Mr. President, an amazing engineering feat is nearing completion in Virginia. It is to be known as the Chesapeake Bay Bridge Tunnel. It will close the last water gap on the coastal highway route from Canada to Key West. It is expected to be opened before summer.

It is a \$200 million combination of tunnels and bridges which will allow cars and trucks to cross the Chesapeake Bay under their own power. It stretches more than 17 miles over and under one of the busier waterways of the world, connecting the mainland of Virginia with its eastern shore.

In February of this year, I had the privilege of traversing the system prior to its completion. What I saw amazed me. I expect the convenience to tourists and the economic consequences of this project will be significant.

My own impressions are told far better than I could describe them by David S. Boyer, in the April 1964 edition of the National Geographic. As with all material published in the Geographic, Mr. Boyer's story entitled, "Over and Under Chesapeake Bay," is accurate, well written, and accompanied by excellent photographic and artwork.

It may be noted that Mr. Boyer found that "there isn't a cent of tax money—Federal, State, city, or county—in our project."

In view of this significant development in the transportation net of the United States, I ask unanimous consent to have the National Geographic article printed in the Record.

There being no objection, the article was ordered to be printed in the Record, as follows:

OVER AND UNDER CHESAPEAKE BAY

(By David S. Boyer)

Through the fog came the wall of a ferryboat. Out where the Atlantic pulses into Chesapeake Bay, the SS *Pocahontas* was mournfully sounding her foghorn—and her own swan song.

One day this spring, she and six other oceangoing ferries will tie up at their Virginia slips for the last time. The cars and trucks they now haul to sea will roll on their own wheels 17.6 miles over, under, and through this windswept arm of the Atlantic. The \$200 million Chesapeake Bay Bridge-Tunnel will be open—triumphant result of a 3½-year struggle with sea and storm.

Longest bridge-tunnel in the world, it closes the last water gap on a coastal highway from Canada to Key West, Fla. The builders say it will double traffic across the mouth of the Nation's largest bay—to 4 million people in the first year.

To conquer this long and lonely stretch where open ocean meets the bay, the engineers designed and built monstrous machines: Big D, a huge pilledriver with extensible legs, like some enormous water bird; the two-headed monster and the slabsetter, which crawl across the concrete piles, putting down roadway as they go.

Motorists will drive beneath two of the east coast's busiest channels, with the keels of oceangoing ships passing but a few yards above their heads. To allow free passage to the great Norfolk Navy Base, to busy Baltimore, and to other ports of Chesapeake Bay, the bridge at two points gives way to tunnels, laid ingeniously in prefabricated sections.

For more than 12 of its 17.6 miles, the bridge-tunnel is a seagoing centipede. On hundreds of concrete trestle legs, it walks away from the mainland Virginia shore at the edge of Virginia Beach.

Then it becomes a sea serpent. It dives beneath the water into a mile-long tunnel laid in a trench along the ocean floor. Reappearing, it curves along more trestle, then ducks for a second mile under the sea.

Sighting land from a third trestle, it arches itself into a high steel bridge. Then it curls 1½ miles across Fisherman Island, slides over a low bridge and moves up an embankment onto the shore of Delmarva Peninsula.

It links two very different worlds. At one end lie Norfolk, Virginia Beach, Portsmouth, Hampton, and Newport News—cities busily crowding together as the result of a population explosion in Tidewater, Va. At the other end of the bridge, a pastoral, early-American calm pervades the Delaware-Maryland-Virginia peninsula.

Neither side will ever be the same again.

HALF-HOUR RIDE WILL COST \$4

Tourists to Miami and truck drivers with their loads of Florida oranges for New York won't have the Federal Government to thank, or even the Virginia Highway Commission, for a 30-minute drive across Chesapeake Bay instead of a 90-minute ferry ride.

They can thank—and pay (\$4 for a passenger car and driver, \$13 for a 4-axle trailer truck)—a group of far-seeing businessmen and politicians from both sides of the crossing.

"There isn't a cent of tax money—Federal, State, city, or county—in our project," said Lucius J. Kellam, chairman of the Chesapeake Bay Bridge and Tunnel Commission. "I can think of few other major highway projects for which that can be claimed."

On a Sunday afternoon Mr. Kellam and I were gazing out a whindow across Delmarva farmland granted to his ancestor Richard Kellam by King Charles I in 1636. The family home is on the Virginia tip of the peninsula that Virginians call the Eastern Shore. To be shuah, most of them call it "the Eastern Shoah."

"We've spent most of our lives trying to tell our friends around the country where the Eastern Shore is," Mrs. Kellam joined in. "Now people know. 'That's where the new bridge goes.'"

"We first operated the ferries as an autonomous commission authorized by the government of Virginia," Mr. Kellam explained. "Then we petitioned to have it become a bridge commission. We acquired power of eminent domain and authority to borrow \$200 million by selling bonds."

That amount will build the bridge-tunnels, staff it, operate it, and pay \$30,000 daily interest on the bonds. When cash begins clinking in, the commission can pay the interest and start retiring its investment.

"We started out," Mr. Kellam continued, "planning to build high-level bridges where our two tunnels are today, over the channels in the bay. But the Navy said it didn't want a bombed bridge bottling up the Atlantic Fleet in Hampton Roads. And the city fathers of Baltimore said they didn't want any height and with restrictions on ships heading for their port."

"So we wound up building tunnels instead. But we built a special bridge near the Eastern Shore for the fishermen. They weren't about to chase schools of menhaden up to a trestle and then lose them for having to detour 11 miles out to our tunnel and back."

The second bridge on this project, tying Fisherman Island to the Delmarva Peninsula, accommodates yachtsmen and others rounding the tip of Cape Charles.

PREVIEW OF CROSSING BY CAR

I visited the bridge-tunnel half a dozen times during the past year, coming to know its engineers and construction workers, who sometimes loved it and sometimes hated it. You can feel pretty close to a thing when you give 3½ years of your life to it. Many of the men were on the job when the mammoth project began, in September 1960.

Finally a day came, this winter, when I could drive across most of the almost finished bridge. The fog that morning was thick and cold. My Oldsmobile sailed straight out onto trestle A into a gray, soupy mixture of ocean and sky.

Through the open wingwindow came the sad sound of a ferry. I drove through the heavy air, recalling what an engineer had predicted. "You know," he said, "they'll barrel across this bridge at 40 or better and never give it a thought as an engineering marvel of the world."

It isn't that trestles and tunnels and bridges like these haven't been built before. They have. But never combined into such a prodigious, complicated feat as this. And never attempted in the teeth of the open ocean. Old-time watermen of Chesapeake Bay had warned that the ferocious winds and waves would never allow man to bridge them.

TUNNELS ANCHORED TO MAN-MADE ISLANDS

Two remarkable pairs of islands were keystones to the success of the undertaking.

Entrances and exits of the two tunnels are on these four man-made isles. The highway leaves the trestle and plunges down, through the islands almost 100 feet to the bottom of the bay.

North and South Islands anchor Thimble Shoal Channel Tunnel, which dips beneath the sandy bottom of Thimble Shoal Channel. This busy shipping lane serves the ports of Hampton Roads, including the world's largest naval base, at Norfolk.

The second pair of islands lies 4 miles to the northeast and belongs to Chesapeake Channel Tunnel, a few feet shorter than

Thimble Shoal but still more than a mile long. Above Chesapeake Tunnel, ships pass to Washington, D.C., Baltimore, and the upper bay.

Workmen ignored a confusion of official names for these two bits of dry land and called them East and West Islands.

I could see, up ahead in the thinning fog, where Trestle A was about to deposit me on South Island.

Like its mates, South Island is a pyramid of sand with a flattened top. Its surface, nearly a quarter of a mile long, rises 30 feet above the water, the same height as the trestles. A straitjacket of stone retains the sand, piled up on the floor of the sea by hydraulic dredges. First gravel, then rock, finally riprap—boulders big as automobiles—were carefully lowered by floating cranes to encase the sandpile as it grew.

All this only holds the sand in, not the water out. Engineers building tunnel approaches in the islands were constantly plagued by what they lightly called "de-watering" problems.

I drove into Thimble Shoal Tunnel. Down here a year before, I had watched a construction man weld a leak while standing in a torrent of salt water. There was a misfit in a joint of the strong double-walled steel tubes that formed the watertight skin of the tunnel. He welded till he could no longer stand the low-voltage electric current shaking his wet body. Then he passed his welding torch to a mate and crawled out of the spurting water. He let me pass him a dry cigarette and light it for him.

"The tourists," he said, inhaling massively, "will go through here bumper to bumper and never wonder what it took to lay this tube. We had to sink 19 of these tunnel sections here in Thimble Shoal Channel. Some 12,000 tons of steel and concrete in each one. And join 'em up under water."

Each of those tunnel sections was 100 yards long, a huge double-walled cylinder sealed at both ends. Each had been built by the American Bridge Division of United States Steel at Orange, Tex., and towed by tugboat 2,000 miles to a fitting-out wet dock at Norfolk.

There chutes poured concrete through roof hatches in the tunnel section, and workmen laid a roadbed. Then the space between the section's two steel shells was partially filled with concrete, leaving the whole monster wallowing like an iceberg, nine-tenths submerged.

Tugs took it to the tunnel site, and a few more tons of concrete were poured into the walls, enough to sink it into the tunnel trench. The trench had been meticulously cut to a tolerance of an inch, in the ocean floor, from a grading barge. As the section sank, deep sea divers guided two giant pins into holes on a section already laid, mating the pair.

"They had to sink 'em at slack tide," my welder friend reminded me. "These tidal currents are like rivers. And you know, they laid 'em within two inches of where it said on the blueprints."

"Now we're cutting out the end plates, opening the joined sections into a tunnel. After we weld them together and fix any leaks like this one, the concrete crew will fill the space and make the whole wall solid."

A high-quality underwater concrete is used to seal the joints. As the concrete is pumped in, the salt water is pushed out.

The welder had had his break and his smoke, and now he headed back to work. "Don't forget to mention," he said, "that six guys died to build all this."

The deaths were due to the kind of construction accidents that are expected: a falling crane boom, a defective electrical tool, a boiler explosion. I have heard it called a miracle that none of the deaths was the direct result of weather. Because the weather was unbelievably fierce.

As I drove on through Thimble Shoal Tunnel, I thought of some of the things I had seen out there on the bridge on cold and cutting winter days.

Once I saw a nor'easter come slashing in off the ocean. When that happened, a dozen cumbersome pieces of floating construction equipment had to be tugged into harbor through a wicked sea. Hundreds of men had to be picked up, from trestles and bridges and islands, all across the angry bay. No matter that it was dangerous for the boatmen and for the workmen themselves, who dropped to the rearing boat decks from rope ladders twisting in the wind.

Bad weather and wind, even swells that came in days afterward from hurricanes far out at sea, scuttled one working day in three during the hard years it took to do the job.

A nor'easter coupled with abnormally high tides struck one memorable March day in 1962. It washed away much of the sand in one half-finished island and sank the giant pile-driving complex known as Big D which contractors had spent a million and a half dollars to create. And it crimped the timetable of the whole project by months.

Up ahead now, I could see the rectangular target of daylight at the exit of the tunnel. I broached on North Island, the one decimated by the March storm, and started along the concrete legs of Trestle B.

I remembered photographing the Big D as it drove cylindrical concrete piles down into the ocean floor to make this ramp—2,640 piles in the entire 12.2 miles of trestle. The floor of the bay is unconsolidated sediment. Bedrock is 2,600 feet below. So some piles had to go 100 feet through the muck to be properly held by firm bearing strata and by friction resistance along their sides.

The longest of the piles measured 172 feet. They were made by cementing together 16-foot precast sections containing prestressed steel wires for strength.

The Big D planted its retractable feet on the hard sand of the ocean bottom when it drove piles. It had to be solid and secure to place the piles within 3 inches of where surveyors pinpointed them.

It could crank itself up on its own stilts, up out of the water if necessary, to ride out a storm. Still, the first Big D crumpled and sank in the March nor'easter. Helicopters dropped rope rigs to rescue two men clinging to the last steelwork above a sea so wild that boat rescue was impossible. A second Big D was built to take the first one's place.

Behind the Big D came a bizarre machine technically known as a traveling bridge, but dubbed the "two-headed monster."

The two-headed monster had cranes at both ends. It traveled across the piles, placing wheels atop each trio, then moving forward on its own steel track, five or six giant steps a day.

At the advancing end, the monster and its crew lopped off the odd-level tops of piles. As the aft end came abreast of the leveled piles, it capped each group of three with a chunk of prestressed and reinforced concrete, big as a truck and weighing 40 tons. These caps would be the foundation for the giant slabs that would form the roadway.

The two-headed monster had a shadow, the slab setter.

The slab setter moved by stepping along the monster's pile caps. Operating high above the rough waters, its lofty crane hoisted precast concrete roadway slabs nearly twice as long as railroad boxcars. When four slabs were laid side by side from cap to cap, to a tolerance of a quarter of an inch, you had 75 more feet of overseas trestle.

This done, the slab setter rolled 75 feet forward, on wheels, along its own 150-foot base framework. It then picked up the half of its framework just vacated, swung it spectacularly out over the ocean, and lowered it onto the next set of caps.